

What is claimed is:

1. A protective ring for a fan protective casing of a gas turbine engine, comprising a penetration sleeve having an alternation of several, interconnected strata, each comprising a metal band and a polymer-impregnated fiber-weave layer.  
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2. A protective ring in accordance with Claim 1, wherein the polymer-impregnated fiber-weave layers comprise at least one of glass fibers, polyethylene fibers, polyamide fibers, aramide fibers and carbon fibers impregnated with at least one of polyester and highly energy-absorbing resins, and the metal bands are constructed of at least one of aluminum, titanium and nickel base alloy.  
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3. A protective ring in accordance with Claim 2, wherein at least one of polyamide and polyethylene fibers known under the trade names KEVLAR and DYNEEMA, respectively, are included in the fiber-weave layers.  
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4. A protective ring in accordance with Claim 3, wherein both an inner and outer circumferential surface are each formed by a metal band.  
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5. A protective ring in accordance with Claim 4, wherein multi-stratum strips of metal bands and fiber-weave layers are joined at the ends by an adhesive to form the protective ring.  
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6. A protective ring in accordance with Claim 5, wherein two ends of the respective metal bands overlap and the fiber-weave layers extend between frontally opposite ends of adjacent metal bands.

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7. A protective ring in accordance with Claim 6, comprising at least two penetration sleeves with matching diameters assembled into one another to obtain a specific large wall thickness.

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8. A protective ring in accordance with Claim 1, wherein multi-ply strips of metal bands and polymer-bonded fiber-weave layers are wound spirally to obtain a protective ring of sufficient wall thickness.

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9. A protective ring in accordance with Claim 1, having sufficiently large wall thickness to act as a full containment.

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10. A protective ring in accordance with Claim 1, comprising a trapping layer of fiber material positioned outside the penetration sleeve for arresting breakthrough of fan blade fragments.

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11. A protective ring in accordance with Claim 1, comprising outer and inner bands constructed of sheet metal and at least one metallic intermediate band constructed of a metal weave of at least one of nickel, titanium, iron and aluminum.

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12. A protective ring in accordance with Claim 1, wherein the fiber layers are wound and comprising two outer

flanges being conformally integrated by the wound fiber layers.

13. A protective ring in accordance with Claim 1,  
5 wherein both an inner and outer circumferential surface  
are each formed by a metal band.

14. A protective ring in accordance with Claim 13,  
10 wherein multi-stratum strips of metal bands and fiber-  
weave layers are joined at the ends by an adhesive to  
form the protective ring.

15. A protective ring in accordance with Claim 14,  
15 wherein two ends of the respective metal bands overlap  
and the fiber-weave layers extend between frontally op-  
posite ends of adjacent metal bands.

16. A protective ring in accordance with Claim 15,  
20 comprising at least two penetration sleeves with match-  
ing diameters assembled into one another to obtain a  
specific large wall thickness.

17. A protective ring in accordance with Claim 1,  
25 wherein multi-stratum strips of metal bands and fiber-  
weave layers are joined at the ends by an adhesive to  
form the protective ring.

18. A protective ring in accordance with Claim 1,  
30 wherein two ends of the respective metal bands overlap  
and the fiber-weave layers extend between frontally op-  
posite ends of adjacent metal bands.

19. A protective ring in accordance with Claim 18, comprising at least two penetration sleeves with matching diameters assembled into one another to obtain a specific large wall thickness.

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20. A protective ring in accordance with Claim 1, comprising at least two penetration sleeves with matching diameters assembled into one another to obtain a specific large wall thickness.